REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed November 2, 2006. In the Office Action, the Examiner notes that claims 1-36 are pending and rejected. By this response, Applicants have herein amended claims 1, 18, 25, and 35. Applicants hereby cancel claim 3.

In view of the foregoing amendments and the following discussion, Applicants submit that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. §103. Therefore, Applicants believe that this application is now in condition for allowance.

It is to be understood that Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant response with amendments.

REJECTIONS

35 U.S.C. §103

Claims 1-2, 5-20, 25-30, 33-36

The Examiner has rejected claims 1-2, 5-20, 25-30, and 33-36 under 35 U.S.C. §103(a) as being unpatentable over Duffield et al. (U.S. Patent 6,912,232, hereinafter "Duffield" in view of Pirot et al. (U.S. Patent 6,856,676, hereinafter "Pirot"). Applicants respectfully traverse the rejection.

Applicants' claim 1 recites:

> Apparatus, comprising:
> a plurality of internet protocol (IP) services aggregation switches for communicating between respective access networks and a core network, each of said IP services aggregation switches communicating with at least one respective VPN customer user, wherein said IP services aggregation switches communicate with said at least one VPN customer user via at least one enhanced integrated access device (EIAD); and
> a dynamic virtual private network (VPN) manager, for providing customer network management and policy server functions, including a user interface enabling remote management of a VPN by a VPN customer user;

said VPN having at least one of a defined quality of service (QoS) parameter, a defined security parameter and a corresponding billing rate, at least one of said QoS parameter and said security parameter being adapted in response to user commands provided to said dynamic VPN manager by said VPN customer user;

said dynamic VPN manager adapting at least one of said IP services aggregation switches and at least one of said EIADs to provide a bidirectional QoS for at least one IP flow.

Duffield and Pirot, alone or in combination, fail to teach or suggest Applicants' claim 1, as a whole. Namely, Duffield and Pirot, alone or in combination, fail to teach or suggest the limitations of "wherein said IP services aggregation switches communicate with said at least one VPN customer user via at least one enhanced integrated access device (EIAD)" and "said dynamic VPN manager adapting at least one of said IP services aggregation switches and at least one of said EIADs to provide a bidirectional QoS for at least one IP flow," as claimed in Applicants' claim 1.

In general, Duffield discloses efficient utilization of network resources in Virtual Private Networks (VPNs). As taught in Duffield, a VPN achieves network resource allocation efficiency by exploiting resource sharing possibilities using multiplexing routing paths between endpoints and dynamic resource allocation techniques that permit real-time resource allocation resizing. Duffield further discloses that, when a VPN is established, routing paths between endpoints of the VPN are optimized for multiplexing opportunities so that resource allocations between nodes along the routing paths within the IP network are reduced to a minimum. (Duffield, Abstract).

Duffield, however, fails to teach or suggest Applicants' invention of claim 1. Duffield fails to teach or suggest an enhanced IAD. Duffield also fails to teach or suggest providing any bidirectional quality of service for an IP flow, much less a dynamic VPN manager adapting at least one IP services aggregation switch and at least one EIAD to provide a bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 1. Thus, Duffield fails to teach or suggest Applicants' claim 1, as a whole.

Furthermore, Pirot fails to bridge the substantial gap as between Duffield and Applicants' claim 1.

In general, Pirot teaches controlling and managing voice and data services in a telecommunications network. As taught in Pirot, a service management subsystem provides service management tools for managing the services, and a service creation subsystem in communication with the service management subsystem for creating the service logic of the services. The service management subsystem includes a service provisioning function for creating and modifying service subscribers and associated profiles, providing service configuration to modify service profiles, providing service activation to launch services, and providing service planning. (Pirot, Col. 7, Line 61 – Col. 8, Line 2).

Pirot, however, fails to teach or suggest Applicants' invention of claim 1. Pirot fails to teach or suggest an enhanced IAD. Pirot also fails to teach or suggest providing any bidirectional quality of service for an IP flow, much less a dynamic VPN manager adapting at least one IP services aggregation switch and at least one EIAD to provide a bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 1.

Although Pirot mentions IP QoS, Pirot merely includes general statements regarding IP QoS. First, Pirot states that an edge router provides IP QoS for stringent SLA (service level agreement). (Pirot, Col. 4, Lines 3-5). Second, Pirot includes a general statement that "[e]volution to IP QoS is also contemplated." (Pirot, Col. 11, Lines 1-2). A general statement that IP QoS may be provided, as taught in Pirot, simply does not teach or suggest providing bidirectional QoS for an IP flow, much less adapting network elements for providing bidirectional QoS for an IP flow. Furthermore, as stated above, Pirot is devoid of any teaching or suggestion of an IAD. As such, Pirot fails to teach or suggest a dynamic VPN manager adapting at least one IP services aggregation switch and at least one EIAD to provide a bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 1.

Since Duffield and Pirot each fail to teach or suggest an IAD, any permissible combination of Duffield and Pirot must also fail to teach or suggest an EIAD. Similarly, since Duffield and Pirot each fail to teach or suggest providing bidirectional QoS for an IP flow, any permissible combination of Duffield and Pirot must also fail to teach or suggest providing bidirectional QoS for an IP flow. Therefore, Duffield and Pirot, alone or in any permissible combination, fail to teach or suggest a dynamic VPN manager adapting at least one IP services aggregation switch and at least one EIAD to provide bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 1. Therefore, Duffield and Pirot, alone or in combination, fail to teach or suggest Applicants' claim 1, as a whole.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 USPQ 416, 420 (Fed. Cir. 1986) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988). Duffield and Pirot, alone or in any permissible combination, fail to teach or suggest Applicant's claim 1, as a whole.

As such, Applicants submit that independent claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, independent claims 18, 25, and 35 include limitations similar to the limitations of claim 1. Therefore, for at least the same reasons as discussed with respect to independent claim 1, claims 18, 25, and 35 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Claims 2, 5-17, 19-20, 26-30, 33-34 and 36 depend directly or indirectly from independent claims 1, 18, 25, and 35 and recite additional limitations thereof. Accordingly, for at least the same reasons as discussed above, Applicants

submit that these dependent claims are also non-obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

Claims 3-4

The Examiner has rejected claims 3-4 under 35 U.S.C. §103(a) as being unpatentable over Duffield and Pirot as applied to claim 1, and further in view of Field (U.S. Patent 6,778,529, hereinafter "Field"). Applicants respectfully traverse the rejection.

Claims 3-4 depend, either directly or indirectly, from independent claim 1. For at least the reasons discussed hereinabove, Duffield and Pirot, alone or in combination, fail to teach or suggest Applicants' invention of at least claim 1, as a whole. Furthermore, Field fails to bridge the substantial gap as between Duffield and Pirot and Applicants' invention.

In general, Field teaches a synchronous switch having a switch interface, a switch controller, and a switch memory. As taught in Field, the switch interface is operable to terminate a bus, the switch controller is operable to determine a type of each received traffic cell, and the switch memory is operable to receive the traffic cell from the switch interface to store the traffic cell at a memory address. (Field, Abstract).

Field, however, fails to teach or suggest a dynamic VPN manager adapting at least one IP services aggregation switches and at least one enhanced IAD to provide a bidirectional QoS for at least one IP flow. Although Field teaches IADs, Field fails to teach or suggest configuration of the IADs by a dynamic VPN manager. Field is devoid of any teaching or suggestion of any VPN capabilities, much less providing bidirectional QoS for an IP flow. As such, Field must fail to teach or suggest adapting at least one IP services aggregation switch and at least one EIAD to provide bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 1.

A system according to the combination of Duffield, Pirot, and Field would, at most, teach a system in which network elements, including IADs, may be configured in support of VPN services, however, the combination of Duffield, Pirot, and Field fails to teach or suggest adapting at least one IP services aggregation switch and at least one EIAD to provide bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 1.

As such, Duffield, Pirot, and Field, alone or in any permissible combination, fail to teach or suggest Applicants' claim 1, as a whole. Furthermore, claims 3-4 depend directly from independent claim 1 and recite additional limitations thereof. Therefore, for at least the same reasons as discussed above with respect to the Examiner's rejection of independent claim 1, dependent claims 3-4 are non-obvious and patentable over Duffield, Pirot, and Field under 35 U.S.C. §103(a).

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

Claims 21-24, 31-32

The Examiner has rejected claims 21-24 and 31-32 under 35 U.S.C. §103(a) as being unpatentable over Duffield and Pirot as applied to claim 18 above and further in view of Forslow (U.S. 2005/0088977, hereinafter "Forslow"). Applicants respectfully traverse the rejection.

Claims 21-24 and 31-32 depend, either directly or indirectly, from independent claim 18. For at least the reasons discussed hereinabove, Duffield and Pirot alone or in combination fail to teach or suggest Applicants' invention of at least claim 18, as a whole.

Furthermore, Forslow fails to bridge the substantial gap as between Duffield and Pirot and Applicants' invention.

In general, Forslow teaches a network-based mobile workgroup system. As taught in Forslow, the network-based mobile workgroup system enables a mobile user to select server resources. (Forslow, Abstract). In particular, as taught in Forslow, the network-based mobile workgroup system provides secure

data access to mobile clients. Furthermore, users within a mobile VPN may communicate using intra-domain, inter-domain, or remote-access routing. (Forslow, Pg. 4, Para. 0065, 0067).

Forslow, however, fails to teach or suggest Applicants' invention of at least claims 18, as a whole. Forslow is devoid of any teaching or suggestion of a dynamic VPN manager adapting at least one IP services aggregation switch and at least one EIAD to provide a bidirectional QoS for at least one IP flow, as claimed in Applicants' claim 18.

As such, Duffield, Pirot and Forslow, alone or in any combination, fail to teach or suggest Applicants' claim 18, as a whole. Accordingly, Applicants submit that independent claim 18 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Furthermore, claims 21-24 and 31-32 depend, directly or indirectly, from independent claim 18 and recite additional limitations thereof. Therefore, at least for the same reasons as discussed above, Applicants submit that these dependent claims are also non-obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

Therefore, Applicants respectfully request that the Examiner's rejection be withdrawn.

SECONDARY REFERENCES

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to Applicants' disclosure than the primary references cited in the Office Action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this Office Action.

CONCLUSION

Thus, Applicants submit that all of the claims presently in the application, are patentable. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Michael Bentley at (732) 383-1434 or Eamon J. Wall, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

2/2/07

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